

What is claimed is:

- Sub B₂
- 5
1. An electron tube comprising:
at least one metal film formed on a base;
at least one linear member provided above the base;
and
at least one additional member for connecting said
at least one linear member to said at least one metal
film,
- 10 wherein said at least one linear member is connected
to said at least one metal film by welding said at least
one additional member to said at least one metal film.
- 15 2. The electron tube of claim 1, wherein said at least
one additional member is at least one metal piece, and on
the condition of interposing said at least linear member
between said at least one metal piece and said at least
one metal film, said at least one linear member is fixedly
attached to said at least one metal film by welding said
at least one metal piece to at least one metal film.
- 20 3. The electron tube of claim 1, wherein said at least
one additional member is independently provided to said at
least one linear member.
- 25 4. The electron tube of claim 1, wherein said at least
one linear member is divided into a plurality of sets and
said at least one metal film is at least one pair of metal
films, each of the sets being provided with one pair of
said at least one pair of metal films.
- 30 5. The electron tube of claim 1, wherein said at least
one linear member is respectively divided into a body and
a fixed portion for fixedly attaching the body to said at
least one metal film, said at least one additional member
- 35

is formed on the fixed portion, and said at least one linear member is fixed to said at least one metal film by welding said at least one additional member to said at least one metal film.

5

6. The electron tube of claim 1, wherein said at least one linear member is a grid and said at least one metal film is a grid electrode.

10

7. The electron tube of claim 5, wherein said at least one linear member is a grid having a first and a second metallic member, and the second metallic member of the grid is said at least one additional member.

15

8. The electron tube of claim 5, wherein said at least one linear member is a grid having a metallic member and an insulating member.

20

9. The electron tube of claim 1, wherein said at least one linear member is a cathode, and said at least one metal film is a cathode electrode.

25

10. The electron tube of claim 1, wherein said at least one linear member serves to support a cathode, a grid or a getter.

30

11. The electron tube of claim 1, wherein said at least one linear member is fixed to said at least one metal film under the condition that a tension force is applied thereto.

35

12. The electron tube of claim 1, wherein said at least one metal film is formed in a thin film.

13. The electron tube of claim 1, wherein the attachment

of said at least one linear member is achieved by using an ultrasonic bonding.

5 14. The electron tube of claim 1, wherein said at least one metal film and said at least one additional member are made of the same metallic material to each other.

10 15. The electron tube of claim 1, further comprising at least one spacer for defining a distance between said at least one linear member and the base and wherein the electron tube is a fluorescent radiation tube.

15 16. The electron tube of claim 1, further comprising a vessel, and said base being in the vessel.

17. The electron tube of claim 1, further comprising a vessel including at least two substrates, and the base being the vessel.

20 18. A method for producing an electron tube comprising the steps of;

forming at least one metal film on a base;

forming at least one additional member on at least one linear member; and

25 fixing said at least one linear member to said at least one metal film by ultrasonic-bonding said at least one additional member to said at least one metal film.

30 19. The method of claim 18, wherein said at least one additional member is at least one metal piece, and on the condition of interposing said at least one linear member between said at least one metal piece and said at least one metal film, said at least one linear member is fixedly attached to said at least one metal film by welding said
35 at least one metal piece to at least one metal film.

20. The method of claim 19, wherein said at least one metal piece is at least one wire for the wire bonding and said at least one wire is welded to said at least one metal film by using the ultrasonic wire bonding.

21. The method of claim 18, wherein said at least one linear member is respectively divided into a body and two fixed portions for fixedly attaching the body to said at least one metal film, said at least one additional member is formed on the fixed portions, and said at least one linear member is fixed to said at least one metal film by welding said at least one additional member to said at least one metal film.

22. A method for producing an electron tube comprising the steps of;

forming a metal film on a vessel;

forming an additional member on a linear member; and

fixing the linear member to the metal film by diffusion-welding or solid-state-welding the additional member to the metal film.

add a